

CLAIMS

1. An electric discharge machining apparatus using linear
motor drive in which a machining power supply unit supplies
a machining power in a space between an electrode and a
5 workpiece and the workpiece is machined while the electrode
and the workpiece are moved in relation to each other by
means of a driving device implemented by a linear motor,
wherein the electric discharge machining apparatus
using linear motor drive has a cooling device for cooling
10 at least one of a magnet and a magnet supporting plate which
supports the magnet which are on the secondary side of the
linear motor.

2. An electric discharge machining apparatus using linear
15 motor drive in which a machining power supply unit supplies
a machining power in a space between an electrode and a
workpiece and the workpiece is machined while the electrode
and the workpiece are moved in relation to each other by
means of a driving device implemented by a linear motor,
20 wherein the electric discharge machining apparatus
using linear motor drive comprises:

 a magnet supporting plate for supporting a magnet which
is on the secondary side of the linear motor;

 a base plate formed with at least one hole portion;

25 a spacer for holding the magnet supporting plate and

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the base plate while leaving a predetermined space therebetween; and

a cooling device for injecting compressed gas from the hole portion of the base plate toward the magnet
5 supporting plate.

3. The electric discharge machining apparatus according to claim 2, wherein the magnet supporting plate is formed with a cooling fin.

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4. The electric discharge machining apparatus according to any one of claims 1 to 3, wherein a dust cover is provided around the driving device configured by the linear motor.

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